

PROJECT TITLE : INSTRUMENTATION AND PROCESS AUTOMATION
PERIOD COVERED : 23 AUGUST - 22 SEPTEMBER 1981
WRITTEN BY : Thévoz-M. (MIT)

Automation of the Smoking Laboratory

The setting-up of the data link between the different laboratories has been completed. About 50 junction boxes are available to the user for the link-up between the various terminals. A direct line connected to the HP 1000 computer will provide the Manager of the Smoking Laboratory with the following possibilities :

- To obtain improved graphic reports on the screen;
- To have remote control of the report printing;
- To have direct access to the data-base;
- To watch over the running of the computer and to collect error and alarm messages;
- To send collective messages to the different work places;
- To copy and store certain results on magnetic tape;
- To obtain detailed reports concerning the analyses in progress.

The connection of some Mettler AK 160 scales to the various electronic interfaces has just been developed and tested on a calculator which may be programmed with a microprocessor (SMAKY 6-Z80). A test programme has been written in assembler language to enable automatic reading on the scale with a fully-automatic stability control. This programme will be used as a basis on which the demonstration post "TPM Determination" will be checked. The latter will be put into use in the Smoking Laboratory by the end of this year.

RTD/DIL Data Processing

The evaluation of the programmes written in BASIC will not be started until October 1981. This delay is due to considerable lateness in the delivery of the HP 85 calculator. The interface used for direct reading of the RTD/DIL measuring instrument (SODIM model) is currently being constructed. It is planned to set it up on the HP 85 calculator at the beginning of November 1981.

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Construction of Measuring Instruments

A series of 10 compressibility instruments (FTR model) is currently being made for a large order from the QA laboratories in Richmond.

A handwritten signature, appearing to read "H. W. B.", is written in black ink above the date.

MIT/jud/SEPTEMBER 17 1981

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